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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/648,697	08/25/2000	Mark E. Redding	230074.0227	6958

7590

04/27/2005

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EXAMINER

REAGAN, JAMES A

ART UNIT

PAPER NUMBER

3621

DATE MAILED: 04/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/648,697

Applicant(s)

REDDING ET AL.

Examiner

James A. Reagan

Art Unit

3621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 7-10,16-19,21-23,26,34 and 40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7-10,16-19,21-23,26,34 and 40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### Status of Claims

1. This action is in response to the Request for Continued Examination filed on 05 April 2005 and the amendment filed on 25 February 2005.
2. Claims 1-6, 11-15, 20, 24, 25, 27-33, and 35-39 have been cancelled.
3. Claims 7, 10, 16, 19, 21-23, 34, and 40 have been amended.
4. Claims 7-10, 16-19, 21-23, 26, 34, and 40 are pending and have been examined.

## RESPONSE TO ARGUMENTS

5. Applicant's arguments received on 25 February 2005 have been fully considered but they are not persuasive. Referring to the previous Office action, Examiner has cited relevant portions of the references as a means to illustrate the systems as taught by the prior art. As a means of providing further clarification as to what is taught by the references used in the first Office action, Examiner has expanded the teachings for comprehensibility while maintaining the same grounds of rejection of the claims, except as noted above in the section labeled "Status of Claims." This information is intended to assist in illuminating the teachings of the references while providing evidence that establishes further support for the rejections of the claims.

In response to applicant's argument regarding claims 7 and 16 that the prior art of record, either alone or in combination, does not fairly teach or disclose that *each client computer that has received an authorization from a particular license server is programmed for determining whether that particular license server is still capable of managing a distribution of allocations to use the protected software*, the Examiner respectfully disagrees and points to the citation shown in the rejections of claims 7 and 16 below.

In response to applicant's argument regarding claims 10 and 19 that the prior art of record, either alone or in combination, does not fairly teach or disclose *receiving a new redundant license file and a new sequence number which is greater than any sequence number currently stored in the memory of the other license servers in the pool*, the Examiner respectfully disagrees and points to the citation shown in the rejections of claims 7 and 16 below. Badonovitz discloses the use of sequencing messages. Inherently, when a new license server is initiated, the current license file must be including in the operations of the new server as well as incrementing the sequencing to show the update. These are essential steps to maintaining a seamless licensing operation.

#### **Claim Rejections - 35 USC § 103**

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-5 and 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wyman (US 5,204,897) in view of Ohran et al. (US 5,978,565), further in view of Badovinatz et al. (US 5,704,032), and further in view of Novaes (US 6,507,863 B2) in view of the Applicant's own admission, and further in view of Bains et al. (US 5,579,222).

**Examiner's note:** Examiner has pointed out particular references contained in the prior art of record in the body of this action for the convenience of the Applicant. Although the specified

citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply. Applicant, in preparing the response, should consider fully the *entire* reference as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

**Claims 7 and 10:**

Wyman discloses maintaining a license data record of product use and authorizations (column 10, lines 30-35).

With regard to the limitation of *at least one client computer coupled to the communication network for requesting authorizations to use the protected software*, Wyman discloses a license management system (see at least abstract).

With regard to the limitation of *a pool of license servers coupled to the communication network, each license server programmed for managing a distribution of one or more allocations to at least one client computer to use the protected software and for maintaining a record of distribution, the pool of license servers including a current leader server programmed for maintaining a record of allocations for license servers in the pool, the pool of license servers including a current leader server programmed for maintaining a record of allocations for license servers in the pool*, Wyman, in Figure 1 and associated text, discloses license servers end users receiving protected software. Ohran discloses backup computer servers (abstract). Maintaining a record is an inherent and obvious requirement to protect against fraud and theft of the protected software. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Wyman with Ohran because each discloses fundamental techniques of server operation. The combination of Wyman/Ohran does not specifically disclose leader servers and selection of new leader servers. However, Badovinatz discloses designation a new leader in a group of processors when the current leader fails

(abstract). Novaes discloses Dynamic Multicast Routing (DRM) in the abstract, and in column 10, lines 38-42, Novaes discloses selecting a new group leader from a Group leader membership list. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Wyman/Ohran and modify it with Badovinatx and Novaes because if the primary server has gone down, then a back up server may communicate with the client machine to authorize the use of an application, thereby taking over license management function, thereby increasing efficiency. In addition, the Applicant in the background of the specification (pages 4 and 5) discloses a SentinelLM system which, in the event of a crashed license server, polls each server computer having a license file containing license Information corresponding to the protected software program. In this way an update of the currently issued licenses is available. It would have been obvious to one of ordinary skill in the art at the time the invention to combine the multiple server and leader server systems and techniques of Wyman/Ohran/Badovinatx/Novaes with the Applicant's disclosure indicating that a polling process these use to update the current status of issued licenses because in the event of a license server crash proper authorizations for the use of protect the software are maintained.

With regard to the limitations of *wherein the pool of license servers includes at least one follower sever, and each follower server is programmed such that it is capable of becoming a new leader server if the current leader server can no longer manage the distribution of allocations the license severs, and wherein upon selecting a new leader server from the pool, the new leader server is further program for receiving from each license server the record of distributions for that particular license server*, Wyman discloses license servers a shown above, Badovinatx discloses leader and follower servers as a shown above, and Ohran discloses back up servers and transferring data from one server to another in the case of a failure (abstract). Novaes discloses Dynamic Multicast Routing (DRM) in the abstract, and in column 10, lines 38-42, Novaes discloses selecting a new group leader from a Group leader membership list. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine

Wyman/Ohran and modify it with Badovinatx and Novaes because if the primary server has gone down, then a back up server may communicate with the client machine to authorize the use of an application, thereby taking over license management function, thereby increasing efficiency. In addition, the Applicant in the background of the specification (pages 4 and 5) discloses a SentinelLM system which, in the event of a crashed license server, polls each server computer having a license file containing license Information corresponding to the protected software program. In this way an update of the currently issued licenses is available. It would have been obvious to one of ordinary skill in the art at the time the invention to combine the multiple server and leader server systems and techniques of Wyman/Ohran/Badovinatx/Novaes with the Applicant's disclosure indicating that a polling process these use to update the current status of issued licenses because in the event of a license server crash proper authorizations for the use of protect the software are maintained.

With regard to the limitation of *the license servers within the pool are programmed for communicating with each other and determining when a particular license server can no longer manage a distribution of allocations to use the protected software*. Badovinatx, however, in Figure 5a and related text, discloses selecting a new group leader when a current server has failed, and informing other servers of the change in leadership. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Wyman/Ohran/Badovinatx/Novaes because, "It ensures that the members of the group are aware of the new group leader and can count on the group leader to control and manage the group" (Badovinatx, column 2, lines 1-6).

The combination of Wyman/Ohran/Badovinatx/Novaes/Applicant discloses the limitations as shown above. Wyman/Ohran/Badovinatx/Novaes/Applicant do not specifically disclose:

- *each client computer that has received an authorization from a particular license server, and the particular license server that sent the authorization to*

*the client computer, are programmed-for communicating heartbeats between each other; and*

- *each client computer that has received an authorization from a particular license server is programmed for determining whether that particular license server is still capable of managing a distribution of allocations to use the protected software;*

Bains, however, in column 7, lines 43-46, discloses using a ping to determine if a server is still functioning properly. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Wyman/Ohran/Badovintz/Novaes with Bains because using a periodic signal to ensure that a license server is operating properly ensures that the usage rights associated with each license is not being fraudulently manipulated.

**Claims 8 and 17:**

With regard to the limitation of *locating a new leader server*, Badovintz discloses designation a new leader in a group of processors when the current leader fails, as shown in the rejection of claims 1 and 11 above. With regard to the limitation of *communicating a heartbeat from the client computer to the new leader server*, Bains, column 7, lines 43-46, discloses using a ping to determine if a server is still functioning properly, as shown in the rejection of claims 7 and 16 above. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Wyman/Ohran/Badovintz/Novaes/Applicant with Bains because if, after determining that local license sever is no longer functional, a new license server must be selected to replace the licensing capabilities, thus maintaining an efficient and seamless licensing provision.



**Claims 9 and 18:**

The combination of Wyman/Ohran/Badovinat/Novaes/Applicant discloses the limitations as shown above. Wyman/Ohran/Badovinat/Novaes/Applicant do not specifically disclose:

- *determining if the new leader server had already issued an authorization to the client computer; and*
- *converting the heartbeat to a request for an authorization if the new leader server had not already issued an authorization to the client computer.*

However, Bains, in column 8, line 60 to column 9, line 20, discloses a lost signal to the license sever, wherein a temporary license may be issued, or a new license may be requested. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Wyman/Ohran/Badovinat/Novaes/Applicant with Bains because if, after determining that local license sever is no longer functional, a new license server must be selected to replace the licensing capabilities, and if a new request for a current license is warranted, thus maintaining an efficient and seamless licensing provision.

**Claim 16:**

With regard to the limitations of:

- *coupling at least one client computer to the communication network for enabling the at least one client computer to issue a request for an authorization to use the protected software over the communication network;*
- *coupling a pool of license servers to the communication network, each license server managing a distribution of allocations to at least one client computer to use the protected software and managing a record of allocations;*
- *selecting one of the license servers in the pool as a current leader server and maintaining a record of allocations for license servers in the pool with the current leader server;*

- *designating other license servers that are not the current leader server as follower servers;*
- *selecting one of the follower servers as a new leader server whenever the current leader server can no longer manage the distribution of allocations for the license servers; and*
- *transmitting the record of allocations for each license server to the new leader server;*

See the rejections above.

The combination of Wyman/Ohran/Badovinat/Novaes/Applicant discloses the limitations as shown above. Wyman/Ohran/Badovinat/Novaes/Applicant do not specifically disclose *determining, by communications between the pool of license servers, when a particular license server can no longer manage a distribution of allocations to use the protected software.* Badovinat, however, in Figure 5a and related text, discloses selecting a new group leader when a current server has failed, and informing other servers of the change in leadership. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Wyman/Ohran/Badovinat/Novaes because, "It ensures that the members of the group are aware of the new group leader and can count on the group leader to control and manage the group" (Badovinat, column 2, lines 1-6).

With regard to the limitations of:

- *communicating heartbeats between client computers that have received an authorization from a particular license server and that particular license server; and*
- *determining, for each client computer that has received an authorization from a particular license server, if that particular license server is still capable of managing a distribution of allocations to use the protected software;*

Bains, column 7, lines 43-46, discloses using a ping to determine if a server is still functioning properly. It would have been obvious to one of ordinary skill in the art at the time of

the invention to combine Wyman/Ohran/Badovintz/Novaes/Applicant with Bains because if, after determining that local license sever is no longer functional, a new license server must be selected to replace the licensing capabilities, thus maintaining an efficient and seamless licensing provision.

**Claim 19:**

With regard to the limitations of:

- *coupling at least one client computer to the communication network for enabling the at least one client computer to issue a request for an authorization to use the protected software over the communication network;*
- *coupling a pool of license servers to the communication network, each license server managing a distribution of allocations to at least one client computer to use the protected software and managing a record of allocations;*
- *selecting one of the license servers in the pool as a current leader server and maintaining a record of allocations for license servers in the pool with the current leader server;*
- *designating other license servers that are not the current leader server as follower servers;*
- *selecting one of the follower servers as a new leader server whenever the current leader server can no longer manage the distribution of allocations for the license servers; and*
- *transmitting the record of allocations for each license server to the new leader server;*

See the rejections above.

The combination of Wyman/Ohran/Badovintz/Novaes/Applicant discloses the limitations as shown above. Wyman/Ohran/Badovintz/Novaes/Applicant do not specifically disclose

*determining, by communications between the pool of license servers, when a particular license server can no longer manage a distribution of allocations to use the protected software.*

Badovinat, however, in Figure 5a and related text, discloses selecting a new group leader when a current server has failed, and informing other servers of the change in leadership. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Wyman/Ohran/Badovinat/Novaes because, "It ensures that the members of the group are aware of the new group leader and can count on the group leader to control and manage the group" (Badovinat, column 2, lines 1-6).

With regard to the limitations of:

- *storing a redundant license file and sequence number within each license server;*
- *storing a new redundant license file and a new sequence number in a particular license server that is no longer capable of managing a distribution of allocations to use the protected software;*
- *restoring functionality to the particular license server that was no longer capable of managing a distribution of allocations to use the protected software; and*
- *transferring the new redundant license file to other license servers in the pool if the new sequence number is greater than any sequence number currently stored in any other license server in the pool;*

Badonovitz discloses the use of sequencing messages. Inherently, when a new license server is initiated, the current license file must be including in the operations of the new server as well as incrementing the sequencing to show the update. These are essential steps to maintaining a seamless licensing operation.

**Claims 21-23:**

With regard to the limitations of:

- *the current leader server is programmed for communicating a heartbeat to each follower server;*
- *each follower server is programmed for communicating an acknowledgement to the current leader server in response to the heartbeat; and*
- *the current leader server designates a follower server as being down if no acknowledgement is received from that follower server;*
- *if a follower server does not receive the heartbeat from the current leader, then the follower server that did not receive the heartbeat sends a check message to the current leader;*
- *if the follower server that did not receive the heartbeat does not receive a response from the current leader in reply to the check message, then the follower server that did not receive the heartbeat starts an election process to elect a new current leader;*
- *if a follower server becomes the new leader server, then the new leader server sends a heartbeat to each of the remaining follower servers;*
- *each of the remaining follower servers communicates the status of the allocations for that particular follower server to the new leader server;*

Badovinatz discloses procedure if a processor fails (see at least column 7, lines 45-56), and the process of selecting a group leader, including new leader lists (see at least column 5, line 33 to column 7, line 44). Novaes, in at least column 11, line 50 to column 12, line 14 also discloses a leadership change protocol, as well as an election of the new leader server.

**Claim 26:**

The following limitations substantially recite the same breath and scope as the claims above, and are therefore rejected on the same grounds.

- *a least one client computer coupled to the communication network for requesting authorizations to use the protected software;*
- *a pool of license servers coupled to the communication network, each license server programmed for managing a distribution of one or more allocations to at least one client computer to use the protected software, the pool of license servers including a current leader server programmed for maintaining a record of allocations for license servers in the pool;*
- *the pool of license servers includes at least one follower server;*
- *each follower server is programmed such that it is capable of becoming a new leader server if the current leader server can no longer manage the distribution of allocations the license servers;*
- *the pool of license servers are programmed for communication with each other and determining when a particular license server can no longer manage a distribution of allocations to use the protected software;*

With regard to the limitations of:

- *each client computer that has received an authorization from a particular license server, and the particular license server that sent the authorization to the client computer, are programmed for communicating heartbeats between each other;*
- *each client computer that has received an authorization from a particular license server also receives a leader priority list from that particular license server;*
- *each client computer that has received an authorization from a particular license server is programmed for determining whether that particular license server is*

*still capable of managing a distribution of allocations to use the protected software; and*

- *each client computer that has received an authorization from a particular license server but has determined that particular license server is no longer capable of managing a distribution of allocations to use the protected software is programmed for locating another license server by using the leader priority list;*

Wyman/Ohran/Badovinat/Novaes/Applicant disclose the limitations as shown above. Wyman/Ohran/Badovinat/Novaes/Applicant do not specifically disclose *the pool of license servers are programmed for communicating with each other and determining, when a particular license server can no longer manage a distribution of allocations to use the protected software.* Badovinat, however, in Figure 5a and related text, discloses selecting a new group leader when a current server has failed, and informing other servers of the change in leadership. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Wyman/Ohran/Badovinat/Novaes because, "It ensures that the members of the group are aware of the new group leader and can count on the group leader to control and manage the group" (Badovinat, column 2, lines 1-6).

**Claim 34:**

Claim 34 recites substantially the same limitations as shown in the claims above and is therefore rejected on the same basis.

**Claim 40:**

With regard to the limitation of *upon receipt of the record of distribution from each license server, the new leader is programmed for amending its record of distribution to include the record of distribution for each license server such that a new record of allocations for the licensed servers in the pool is created on the new leader,* Wyman discloses license servers as shown

above, Badovinatx discloses leader and follower servers as shown above, and Ohran discloses back up servers and transferring data from one server to another in the case of a failure (abstract). Novaes discloses Dynamic Multicast Routing (DRM) in the abstract, and in column 10, lines 38-42, Novaes discloses selecting a new group leader from a Group leader membership list. In addition, Badonovitz, in at least column 12, lines 34-42 discloses group state value that is updated by the group. It would have been obvious to one of ordinary skill in the art at the time the invention to modify the multiple server and leader server systems and techniques of Wyman/Ohran/Badovinatx/Novaes/Applicant by substituting the group state value with a license state value of the network because this would ensure that an accurate accounting of properly issued licenses is maintained.



Any inquiry of a general nature or relating to the status of this application or concerning this communication or earlier communications from the Examiner should be directed to **James A. Reagan** whose telephone number is **571.272.6710**. The Examiner can normally be reached on Monday-Friday, 9:30am-5:00pm. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, **James Trammell** can be reached at **571.272.6712**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://portal.uspto.gov/external/portal/pair>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at **866.217.9197** (toll-free).

Any response to this action should be mailed to:

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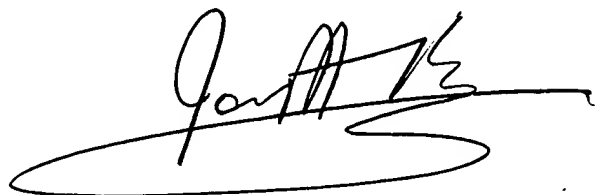
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Hand delivered responses should be brought to the **United States Patent and Trademark Office Customer Service Window:**

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JAR

22 April 2005

A handwritten signature in black ink, appearing to read "Jonathan A. Reagan", with a large, sweeping underline.